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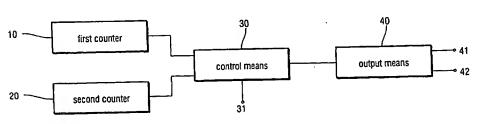(74) Agent: DE JONG, Durk, J.; Internationaal Octrooibureau B.V., Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).

(54) Title: SPACECAKE COPROCESSOR COMMUNICATION

(57) Abstract: The invention is based on the idea to maintain two counters for an input or output port of a FIFO. A device for writing data elements from a coprocessor into a FIFO memory is provided. Said device is embedded in a multiprocessing environment comprising at least one coprocessor, a FIFO memory and a controller. Said device comprises a first counter for counting the available room in said FIFO memory, and a second counter for counting the number of data elements written into said FIFO memory. Said device further comprises a control means for checking said first counter for available room in said FIFO memory, and for checking said second counter whethera predetermined number N of data elements have been written into said FIFO memory. Said control means decrements the count of said first counter and increments the count of said second counter, after a data element has been written into said FIFO memory. Said device finally comprises an output means for outputting data elements to said FIFO memory. Said control means issues a first message when the count of said second counter has reached said predetermined number N and issues a first call for available room in said FIFO memory to said controller. Said output means forwards said first message and/or said first call to said controller.